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Draft Environmental Impact Statement for the Draft Revised Forest Plan

Summary

Helena – Lewis and Clark National Forest

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List of Abbreviations

BASI	best available scientific information
BO	biological opinion
DEIS	draft environmental impact statement
EIS	environmental impact statement
FEIS	final environmental impact statement
FS	Forest Service
GA	geographic area
GIS	geographic information system
HLC NF	Helena - Lewis and Clark National Forest
IRA	inventoried roadless area
LRMP	land and resource management plan
NEPA	National Environmental Policy Act
NF	National Forest
NFMA	National Forest Management Act
NFS	National Forest System
NRLMD	Northern Rockies Lynx Management Direction
ROD	record of decision
RWA	recommended wilderness area
USDA	United States Department of Agriculture
WSA	wilderness study area

Purpose and Need for Action

The Forest Service has prepared this draft environmental impact statement (DEIS) to describe and analyze in detail five alternatives for managing the land and resources of the Helena – Lewis and Clark National Forest (HLC NF). The DEIS describes the affected environment and the environmental consequences of the alternatives.

This DEIS is a programmatic document. It discloses the environmental consequences of implementing the Draft Revised Forest Plan on a large scale, at the planning level. This is in contrast to analyses conducted for site-specific projects. The DEIS presents a programmatic, forest level of analysis but does not predict what will happen each time the standards and guidelines are implemented at the project level. Environmental consequences for individual, site-specific projects on the Forest are not described. The environmental effects of individual projects will depend on the implementation of each project.

Best Available Scientific Information

The 2012 Planning Rule requires the responsible official to use the best available scientific information (BASI) to inform the development of the proposed plan, including plan components, the monitoring program, and plan decisions. The foundation from which the plan components were developed for the proposed action was provided by the Assessment of the HLC NF, the BASI, and analyses therein. From this foundation, specialists used a number of resources that included peer-reviewed and technical literature, databases and data management systems, modeling tools and approaches, information obtained via participation and attendance at scientific conferences, local information, workshops and collaborations, and information received during public participation periods for related planning activities. Resource specialists considered what is most accurate, reliable, and relevant in their use of the BASI. The BASI includes the publications listed in the literature cited sections of the Assessment and DEIS.

Proposed Action

The Forest Service (FS) proposes to revise the land resource management plan (LRMP - hereinafter referred to as the "draft forest plan") in compliance with the National Forest System (NFS) land management planning rule (36 CFR § 219). The area covered under this revision is shown in Figure 1.

To develop a proposed action that makes changes to a forest plan, the management direction in the current plan and its amendments was reviewed. Effective management direction from the current plan may be retained, or it may be modified or augmented by incorporating relevant new scientific information or direction from other regulatory documents. The 2012 Planning Rule requirements also mandate that new management direction be developed to address sustainability. Consideration of ecologic, economic, and social sustainability is required by the 2012 Planning Rule.

The Planning Area

The planning area is the HLC NF, which is located in central Montana in the Rocky Mountains and includes approximately 2,846,606 acres of public NFS land within its administrative boundaries. In addition, the plan area includes approximately 30,973 acres of NFS land on the Beaverhead-Deerlodge National Forest that is administered by the Helena National Forest and about 2,308 acres of NFS lands that exist as isolated parcels outside of the administrative boundaries. Inholdings of other ownerships occur within the HLC NFs administrative boundaries. These lands are not included in the acreages listed above and are not subject to FS management. The Forest includes portions of 17 counties. The plan area encompasses eight ranger districts: Lincoln, Helena, Townsend, Belt Creek, Judith, Musselshell, Rocky Mountain, and White Sulphur Springs. The Forest Supervisor's offices are located in Helena and Great Falls, Montana. See Figure 1.

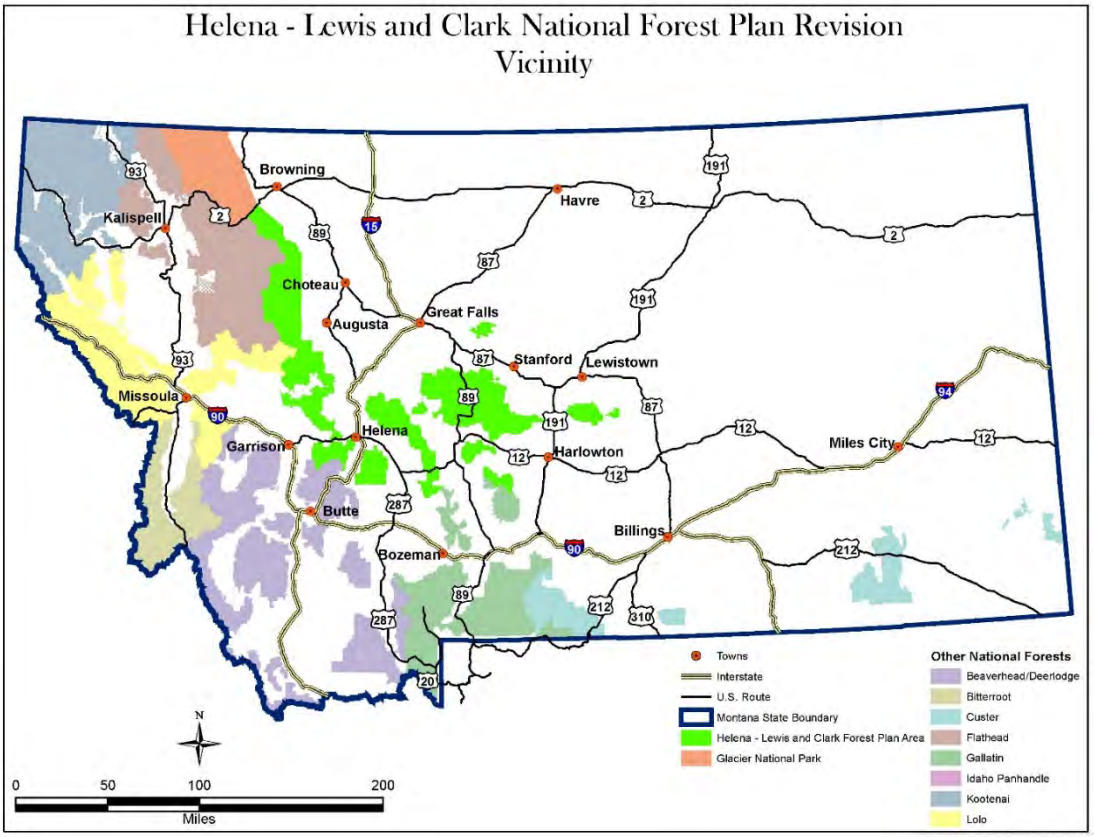


Figure 1. Helena – Lewis and Clark National Forest and vicinity

Geographic areas

The HLC NF straddles the Continental Divide and includes several island mountain ranges. Because of its diversity and extent, and because the island mountain ranges each include unique ecological and social context, the plan area is divided into ten geographic areas (GAs). GAs provide a means for describing conditions and trends at a more local scale if appropriate. The GAs identified in the draft revised plan correspond to the island mountain ranges and/or district or watershed boundaries. Table 1 displays the acres of the HLC NFs by GA. Figure 2 displays the GAs.

Table 1. Acres within the ten GAs on the HLC NFs, within the administrative boundary

GA	Total Acres (all ownerships)	NFS acres within the GA	% of GA in NFS lands
Big Belts	452,292	312,983	69
Castles	79,862	69,610	87
Crazies	70,036	57,618	82
Divide	232,890	202,577	87
Elkhorns	175,259	160,599	92
Highwoods	44,495	42,315	95
Little Belts	900,961	802,711	89
Rocky Mountain Range	782,986	777,963	99
Snowies	121,897	117,989	98
Upper Blackfoot	348,185	333,215	96

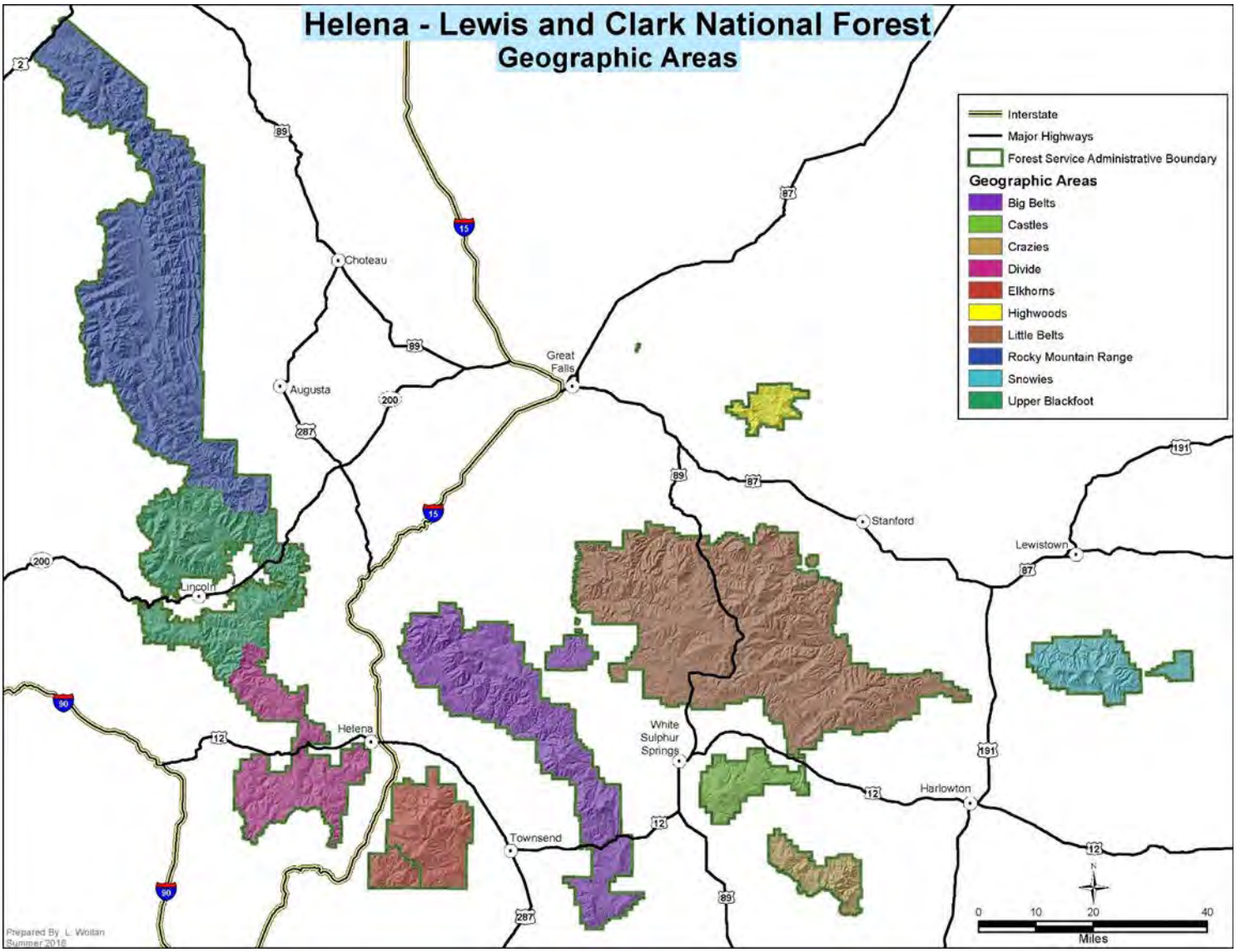


Figure 2. GAs of the HLC NF

Purpose and Need for Action

The purpose of the revised HLC NF LRMP is to provide an integrated set of plan direction for social, economic, and ecological sustainability, and multiple uses of the HLC NF lands and resources. The requirements of the 2012 Planning Rule, findings from the assessment, changes in conditions and demands since the 1986 forest plans, and public concerns highlighted several areas where changes are needed to the current plan.

After a series of public meetings, as well as discussions with resource specialists, the Preliminary Need to Change Report identified a variety of subjects for which change was needed. Those included changed social and ecological conditions, economic contributions to local communities, climate change, invasive species, and increasing use by the public and desire for access to NFS lands.

More specifically there is a need to revise the existing forest plans to:

- Create one forest plan to manage the HLC NF that is consistent across two formerly separate NFS.
- Address changes that have occurred in the conditions and demands since the 1986 forest plans.
- Be consistent with the 2012 Planning Rule and associated directives by using adaptive management, public input, and best available science.
- Address changes in economic, social, and ecological conditions, new policies and priorities, and new information based on monitoring and scientific research.

Public Involvement

The HLC NF began public participation activities prior to the development of the Assessment of the HLC NF. The Forest contracted with the Center for Natural Resources and Environmental Policy at the University of Montana to develop an extensive public engagement process. The Center facilitated numerous public and interagency meetings to bring together information for the HLC NF to consider in preparing the assessment, developing the proposed action, and developing alternatives to the proposed action. There were four rounds of public meetings. The first set of meetings introduced the concepts of forest plan revision to the public. The next meetings discussed the Need to Change, the Desired Conditions, and Forest Resource Management (including wilderness and timber suitability). Public input was taken at each meeting as well as throughout the process. The dialogue and recommendations from this public involvement process were used to help develop the draft proposed action.

In addition to postal mail and email, public meeting information was announced via the forest plan revision website (www.fs.usda.gov/goto/hlc/forestplanrevision). The website also included means for the public to comment (using electronic or printed comment forms, a mapping tool, subscribing to the website, and/or submitting comments via an electronic database) and posted meeting results and other information. Updates were posted and mailed periodically.

The notice of intent for the proposed action to prepare an EIS was published in the Federal Register on December 1, 2016. The notice of intent asked for public comment on the proposal for a 120-day period. The agency held nine public meetings to provide opportunities to better understand the proposed action so that meaningful public comments could be provided by the end of the scoping period. Using the comments from the public, other agencies, tribes, and organizations, the Forest's interdisciplinary team developed a list of issues to address through changes to the proposed action, development of alternatives, or in analysis of impacts of the proposed action.

Government Agency Involvement

The 2012 Planning Rule (36 CFR § 219.4(b)) requires the review of the planning and land use policies of other Federal agencies, state and local governments, and Indian tribes. As part of that outreach effort, a

number of discussions with representatives from those agencies were initiated, and ongoing dialogue continues. In addition, the Center for Natural Resources and Environmental Policy at the University of Montana organized and facilitated intergovernmental meetings. These meetings enabled the Forest to learn about upcoming plans and projects from other agencies, as well as being able to evaluate whether those planning documents were or were not consistent with the proposed HLC NF plan. These meetings provided agencies an opportunity to exchange updates and information.

The Forest reviewed other agency planning documents that are within or in close proximity to the HLC NF for consistency. Management of public lands adjacent to the HLC NF was considered in the formulation of alternatives and in the analysis of cumulative effects of those alternatives. Land management plans were reviewed for consistency with the forest plan. The draft forest plan is consistent with the majority of these plans. Discrepancies can be found in specific resource sections. For example, county wildfire protections plans emphasize protection of values at risk; while the draft plan integrates these values with other resource objectives. While certain components may not be fully consistent, the HLC NF will continue to work with these entities to address the impacts and benefits from forest management.

Forest Service Planning

Forest Service planning takes place at different organizational levels and geographic scales. Planning occurs at three levels—national strategic planning, NFS unit planning, and project or activity planning. The Chief of the Forest Service is responsible for national planning, such as preparation of the FS strategic plan that established goals, objectives, performance measures, and strategies for management of the NFS. NFS unit planning results in the development, amendment, or revision of a land management plan, such as the HLC NF forest plan. The supervisor of the national forest is the responsible official for the development and approval of a plan, plan amendment, or plan revision for lands under the responsibility of the supervisor. The forest supervisor or district ranger is the responsible official for project and activity planning (§ 219.2).

National strategic planning

The United States Department of Agriculture (USDA) Forest Service Strategic Plan: Fiscal Year 2015-2020 contains four outcome-oriented goals for the FS, each with strategic objectives. The strategic plan can be accessed online (www.fs.fed.us/strategicplan). The first two goals and related objectives are directly related to the current planning effort:

1. Sustain our Nation’s forests and grasslands
    - Foster resilient, adaptive ecosystems to mitigate climate change
    - Mitigate wildfire risk
    - Conserve open space
2. Deliver benefits to the public
    - Provide abundant clean water
    - Strengthen communities
    - Connect people to the outdoors

The FS continues to use the results of the 2010 Resources Planning Act Assessment, a report on the status and projected future trends of the nation’s renewable resources on all forests and rangelands, as required by the 1974 Forest and Rangeland Renewable Resources Planning Act. The assessment includes analyses of forests, rangelands, wildlife and fish, biodiversity, water, outdoor recreation, wilderness, urban forests, and the effects of climate change on these resources. The assessment provides a snapshot of current U.S. forest and rangeland conditions (all ownerships), identifies drivers of change for natural resource

conditions, and projects the effects of those drivers on resource conditions 50 years into the future. This assessment uses a set of future scenarios that influence the resource projections, allowing the exploration of a range of possible futures for U.S. renewable natural resources. Alternative future scenarios were used to analyze the effects of human and environmental influences on U.S. forests and rangelands, including population growth, domestic and global economic growth, land use change, and climate change.

In addition, the USDA strategic plan for fiscal year 2014-2018 has specific goals that also align with the 2012 Planning Rule, including (1) assist rural communities to create prosperity so they are self-sustaining, repopulating, and economically thriving; and (2) ensure our national forests and private working lands are conserved, restored, and made more resilient to climate change while enhancing our water resources. The USDA strategic plan can be accessed on the USDA's Web site (www.usda.gov).

National Forest System unit planning

The National Forest Management Act (NFMA) of 1976 (Pub. L. 94-588) amended the Forest and Rangeland Renewable Resources Planning Act of 1974. The NFMA requires the preparation of an integrated land management plan by an interdisciplinary team for each unit of the NFS (national forests and grasslands). The public must be involved in preparing and revising forest plans. Forest plans must provide for multiple use and sustained yield of products and services and include coordination of outdoor recreation, range, timber, watershed, wildlife and fish, and wilderness. The forest plan does not authorize site-specific prohibitions or activities; rather, it establishes broad direction, similar to zoning in a community.

The 2012 Planning Rule for land management planning for the NFS sets forth process and content requirements to guide the development, amendment, and revision of land management plans to maintain and restore NFS land and water ecosystems while providing for ecosystem services (the benefits people obtain from the NFS planning area) and multiple uses(USDA, 2012)(USDA, 2012)(USDA, 2012)(USDA, 2012)(USDA, 2012)(USDA, 2012). The final planning directives, effective January 30, 2015, are the key set of agency guidance documents that direct implementation of the 2012 Planning Rule.

Project or activity planning

Project and activity consistency with the forest plan (§ 219.15) will be achieved through (1) application to existing authorizations and approved projects or activities, (2) application to projects or activities authorized after the plan decision, (3) resolving inconsistency, (4) determining consistency, and (5) consistency of resource plans within the planning area with the land management plan. Refer to pages 10-11 of the forest plan for additional information about project and activity consistency. Previously approved and ongoing projects and activities are not required to meet the direction of the forest plan and will remain consistent with the direction in the 1986 forest plan, as amended.

The forest plan direction will apply to all projects and or activities that have a decision made on or after the effective date of the final ROD. Projects and activities authorized after approval of the forest plan will be consistent with applicable plan components in the forest plan. A project or activity approval document will describe how the project or activity is consistent with the applicable plan components.

Any resource plans developed by the Forest that apply to the resources or land areas within the planning area will be consistent with the plan components. Resource plans developed prior to the plan decision will be evaluated for consistency with the plan and amended if necessary.

When a proposed project or activity would not be consistent with the applicable plan components, the responsible official shall take one of the following steps, subject to valid existing rights (36 CFR § 219.15(c)):

- modify the proposed project or activity to make it consistent with the applicable plan components,

- reject the proposal or terminate the project or activity,
- amend the plan so that the project or activity will be consistent with the plan, as amended, or
- amend the plan contemporaneously with the approval of the project or activity so that the project or activity will be consistent with the plan, as amended. This amendment may be limited to apply only to the project or activity.

The forest supervisor or district ranger is the responsible official for project and activity planning. In order for prohibitions or activities that take place on the ground, project or activity decisions will need to be made following appropriate procedures (e.g., site-specific analysis in compliance with National Environmental Policy Act (NEPA)).

Issues

Issues serve to highlight effects or unintended consequences that may occur from the proposed action or alternatives, giving opportunities during the analysis to reduce adverse effects and compare trade-offs for the decision maker and public to understand. Issues were identified through scoping. Significant issues were defined as those directly or indirectly caused by implementing the proposed action, involve potentially significant effects, and could be meaningfully and reasonably evaluated and addressed within the programmatic scope of a Forest Plan. Some issues are best resolved at finer scales (subsequent NEPA analysis) where the site-specific details of a specific action and resources it affects can be meaningfully evaluated and weighed. Conversely, some issues have already been considered through broader programmatic NEPA analysis [e.g. the Northern Rockies Lynx Management Direction (NRLMD) Final Environmental Impact Statement (FEIS)]. In these cases, the issues focus on evaluating the effects unique to and commensurate with the decisions being considered here.

Alternatives were developed around those significant issues that involved unresolved conflicts concerning alternative uses of available resources (40 CFR 1500.2(e)). The HLC NF identified the following significant issues during scoping that drove alternative development.

Issues that drove alternatives

Recommended wilderness and undeveloped areas

The allocation of recommended wilderness areas (RWAs) was a primary issue for the majority of the public commenters. The range of public comments regarding RWAs was vast. On one end of the spectrum, commenters asked the Forest to consider all existing inventoried roadless areas (IRAs) for RWAs. At the other end of the spectrum, commenters desired no RWAs. Many commenters recommended the consideration of additions or deletions to specific areas that were identified in the proposed action. Commenters also provided recommendations on areas they wished to remain undeveloped where primitive recreation opportunities are provided.

Motorized and mechanized means of transport in recommended wilderness areas

In addition to the issue of the amount and location of RWAs, whether or not to allow motorized and mechanized recreation uses within RWAs was also a primary concern of many public comments. Comments included those in favor of prohibiting motorized and mechanized means of transport within RWAs, as well as those that desire to continue these uses unless the RWAs are formally designated by Congress. The motor vehicle use and mountain bike communities were most vocal on this issue. Some motorized users do not want to see further restrictions on motorized access. The mountain bike community was concerned about the potential loss of access to areas that they currently use. To address these public concerns, alternatives were created that analyzed the effects of allowing as well as not allowing motorized and mechanized means of transport on wilderness character within RWAs.

To address additional concerns about wildlife habitat in the core of the Elkhorns wildlife management unit, one alternative analyzed closing the core of the Elkhorns to mechanical means of transport (mountain bikes).

Timber harvest and timber production

Timber harvest and production was raised as an issue by many public commenters. This topic includes the identification of lands suitable for timber production, estimated volume outputs of timber, and timber harvest conducted both for timber production and for other purposes. The comments included requests to increase the amount of lands suitable for timber production, increase timber volume offered from NFS lands, and/or increase the number of acres treated with harvest. Conversely, other commenters requested that few or no lands be suitable for timber production, and/or that less timber harvest occurs on NFS lands.

Alternatives

The range of alternatives developed and presented is based on a preliminary evaluation of the information gathered from public and internal comments and the purpose and need for the project. While all alternatives provide a wide range of ecosystem services and multiple uses, some give slightly greater emphasis to selected resources based on the theme of the alternative and response to revision topics.

A list of significant issues was identified during the public involvement period, and some of these issues drove the development of alternatives. Some additional items, such as the WSRs eligibility study and the wilderness inventory and evaluation, are addressed in the revision because they are required by planning regulations (i.e., 36 CFR § 219.17(3)(b)(1)).

Alternative A is the no-action alternative, which reflects the 1986 forest plans, as amended to date, and accounts for current laws, regulations, and terms and conditions from biological opinions (BOs). Alternative B was released for public review and comment as the proposed action. Development of alternatives C, D, and E was driven by issues identified during scoping. The alternatives span the range of forest management practices and uses of available resources. The general theme and intent of each alternative is summarized below.

The HLC NF has not identified a preferred alternative(s) at this point but plans to identify a preferred alternative in the FEIS after reviewing and considering the analysis presented in this DEIS and comments received by the public on this document.

Given the extensive public engagement and environmental review recently completed for the forests' travel management decisions, all action alternatives would be generally consistent with the current travel plans, which are primarily reflected by motorized versus nonmotorized ROS settings. To respond to the issues, ROS settings would be adjusted by alternative where the shift remains consistent with the travel plans.

Elements common to all alternatives

All alternatives in this document adhere to the principles of multiple use and the sustained yield of goods and services required by the CFR (36 CFR § 219.1 (b)). All the alternatives are designed to:

- meet law, regulation, and policy;
- contribute to ecological, social, and economic sustainability;
- meet the purpose and need for change and address one or more significant issues;
- provide integrated direction as included in the forestwide desired conditions, objectives, standards, guidelines, and sustainability;
- provide sustainable levels of products and services, and

- comply with existing travel plans, except in RWAs and other limited locations.

In addition, the following would be the same for all alternatives:

- Existing developed recreation sites and recreation residence special use permits would be allowed; alternatives do not make decisions to remove or create developed recreation sites.
- Management direction for and location of utility and road rights-of-way, easements, and communication sites would remain constant.
- National Wilderness System lands and plan components would remain constant.
- Oil and gas leasing decisions would not be made.
- Eligible WSRs would remain constant.
- Recent and updated multi-region management direction for Canada lynx; and new management direction for grizzly bear would be incorporated.

Elements common to all action alternatives

All action alternatives are designed to be consistent with the 2012 Planning Rule and associated directives, and emphasize adaptive management and the use of best available science.

Alternative A – no action

Alternative A, the no-action alternative, reflects current management practices under the 1986 forest plans, as amended and implemented, and provides the basis for comparing alternatives to current management and levels of output. Alternative A does not address some of the elements associated with the 2012 Planning Rule, such as timber suitability or riparian management zones (RMZs). The Council on Environmental Quality regulations (40 CFR 1502.14d) requires that a "no action" alternative be analyzed in every EIS. This does not mean that nothing would occur under alternative A. The current conditions as described by each resource in chapter 3 would continue. Under this alternative, current management plans would continue to guide management of the plan area, and ongoing work or work previously planned and approved would occur under that guidance. Laws and regulations that have been adopted since the 1986 plans will be analyzed as part of the no-action alternative (for example, the designation of IRAs). With respect to the identified issues, the alternative is described as follows:

- There would be three RWAs (Big Log, Mount Baldy, and Electric Peak – also known as Blackfoot Meadows).
- Existing mechanized means of transport would be allowed in all areas except designated wilderness.
- Lands suitable for timber production would be based on the 1986 plans as amended and implemented, with current regulation and policy. When consistent with other plan components, harvest for purposes other than timber production could occur on a subset of unsuitable lands.
- Standards for elk security are included in the 1986 plans.

Alternative B

Alternative B, which was scoped as the proposed action, represents a mix of RWAs and lands identified as suitable for timber production. The balance of opportunities available for primitive recreation and nonmotorized recreation experiences versus less primitive and more motorized recreation experiences would be generally consistent with current travel plans, except in the case of RWAs. With respect to the identified issues, the alternative is described as follows:

- There would be nine RWAs (Big Log, Mount Baldy, Blackfoot Meadows, Deep Creek, Big Snowies, Dearborn Silverking, Red Mountain, Arrastra Creek, and Nevada Mountain).
- Motorized and mechanized means of transport would be prohibited in RWAs.

- All lands that were are not withdrawn from timber suitability due to legal or technical factors would be suitable for timber production except for: areas with primitive and semi-primitive nonmotorized ROS; RWAs; and the Elkhorns GA, South Hills Recreation Area, Badger Two Medicine area, Highwoods GA, Snowies GA, and Dry Range. When consistent with other plan components, harvest for purposes other than timber production could occur on other lands not suitable for production.
- Plan components that specifically address management of elk security would be included.

Alternative C

Alternative C is a modified proposed action, which also represents a mix of RWAs and lands identified as suitable for timber production. The balance of opportunities available for primitive recreation and nonmotorized recreation experiences versus less primitive and more motorized recreation experiences would be generally consistent with current travel plans, except in the case of RWAs. In the Divide and Elkhorn GAs some changes to the ROS would be included in this alternative. This is proposed for areas where desired future management would require changes to the travel plans. With respect to the identified issues, the alternative is described as follows:

- There would be nine RWAs; these are the same as listed for alternative B.
- Motorized and mechanized means of transport in RWAs would be allowed.
- Changes to the ROS settings in the Elkhorns and Divide GAs would require minor changes to existing travel plans shifting from motorized to nonmotorized semi-primitive recreation opportunities.
- An area within the Elkhorns "core" would be identified where no mechanized means of transport would be allowed.
- The timber suitability determinations would be the same as described for alternative B.
- Plan components that specifically address management of elk security would not be included

Alternative D

Alternative D was developed to address comments and themes of limiting human influences on the landscape. This alternative would be responsive to commenters who desire more undeveloped recreation areas, and includes the greatest amount of RWAs and least amount of lands suitable for timber production. RWAs and primitive or semi-primitive nonmotorized ROS areas were selected where consistent with current travel plans with emphasis given to areas where decreased human presence would enhance connectivity for wildlife. In this alternative, the core of the Elkhorn Mountains would be identified as an area where mechanized means of transport would not be allowed. With respect to the identified issues, the alternative is described as follows:

- There would be 16 RWAs. These would include the nine areas listed for alternatives B and C in addition to the following 7 areas: Camas Creek; Wapiti Peak; Loco Mountain; Colorado Mountain; Tenderfoot Creek; Big Horn Thunder; and Middle Fork Judith. RWAs would be identified with consideration given to maintaining or enhancing potential habitat connectivity for large, wide-ranging wildlife species within and among GAs. Includes additions to the original Blackfoot Meadows and Nevada Mountain RWAs.
- Motorized and mechanized means of transport would be prohibited in RWAs.
- Additional primitive ROS areas would be identified in the Elkhorns, Highwoods, and Badger Two Medicine areas of the Rocky Mountain Range to provide additional undeveloped areas.
- In addition to the exclusions from alternative B, lands would not be suitable for timber production within additional RWAs, or where the ROS settings are modified to be primitive or semi-primitive nonmotorized. When consistent with other plan components, harvest for purposes other than timber production could occur on lands not suitable for production.

- Plan components that specifically address management of elk security would not be included.

Alternative E

Alternative E was developed to address comments and themes of increasing timber production from NFS lands and not including any RWAs. All lands that may be suited are included as suitable for timber production, with the exception of the Badger Two Medicine area and the Elkhorns GA. The recreation opportunities spectrum classes that are the most compatible with harvest activities are selected where consistent with current travel plans. No RWAs are included. With respect to the identified issues, the alternative is described as follows:

- There would be no RWAs.
- Mechanized means of transport would not be prohibited anywhere except designated wilderness.
- All lands that were are not withdrawn from timber suitability due to legal or technical factors would be suitable for timber production except for those lands within the Elkhorns GA and the Badger Two Medicine area. When consistent with other plan components, harvest for purposes other than timber production could occur on a subset of unsuitable lands.
- Plan components that specifically address management of elk security would be included.

Comparison of alternatives

Forestwide comparison of alternatives by issue

Table 2 displays the range of alternatives with respect to the issues. Numbers such as acres, miles, and volumes are approximate due to the use of geographic information system (GIS) data and rounding.

Table 2. Comparison of issues (and their measurement indicators) by alternative

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	3	9	9	16	0
2) Acres of RWAs	34,226	213,076	213,076	474,589	0
3) Acres of additional undeveloped areas[1]	0	0	0	183,094	0
Motorized and mechanized means of transport in recommended wilderness					
1) Miles of trail no longer available to mechanized means of transport	0	206	0	442	0
2) Miles of road no longer open for access	0	12	0	23	0
3) Acres of motorized over-snow use no longer available	0	24,290	0	79,109	0
4) Miles of motorized trail no longer available	0	0.1	0	59	0
Timber harvest					
1) Acres suitable for timber production	430,489	443,057	443,057	435,014	474,640
2) Acres unsuitable for timber production where harvest may occur for other purposes, outside IRAs[2]	418,133	489,392	489,392	444,840	463,414
3) Projected timber sale quantity (PTSQ) Decade 1	4.34 mmcf (19.68 mmbf)	4.25 mmcf (19.18 mmbf)	4.25 mmcf (19.18 mmbf)	4.26 mmcf (19.28 mmbf)	7.41 mmcf (36.06 mmbf)
4) Projected wood sale quantity (PWSQ) Decade 1	6.35 mmcf	6.24 mmcf	6.24 mmcf	6.25 mmcf	9.87 mmcf
5) Projected acres of timber harvest Decade 1	4,108 acres	4,091 acres	4,091 acres	4,075 acres	2,336 acres

1. Additional undeveloped areas that vary by alternative are those designated as a primitive ROS. Other land designations are present on the landscape which reflect a largely undeveloped character, but do not vary by alternative. Such lands include designated wilderness and IRAs.
2. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Recommended wilderness and undeveloped areas

The amount and location of RWAs were several of the primary issues that drove the development of alternatives. Three areas are recommended as wilderness in alternative A, under the existing 1986 forest plans. In alternatives B and C, 9 areas are recommended which represent an area about 6 times greater than the total included in alternative A. Alternative D was designed to respond to public desires for more RWA to the greatest

degree, and includes 16 RWAs. In addition, several other areas were designated with a primitive ROS in this alternative, in response to public comments requesting additional undeveloped areas. Alternative E does not recommend any wilderness or additional undeveloped areas, and responds to public comments and desires to decrease the amount of RWAs and other undeveloped lands.

In all alternatives, including alternative E, there are additional lands that have an undeveloped character based on legal designations which do not vary by alternative (such as designated wilderness and IRAs).

Motorized and mechanized means of transport in RWAs

Whether or not continuation of existing motorized and mechanized transport is allowed in RWAs also varies by alternative in response to public comments. In alternatives A and C, these uses are allowed within RWAs. In alternatives B and D, these uses would not be allowed. There is no RWA in alternative E. Therefore, alternatives A, C, and E would represent no net change to the motorized and mechanized uses in these areas.

Timber harvest and timber production

The lands suitable for timber production vary by alternative. Alternative A has the least amount, but is similar to alternatives B/C and D. With these alternatives, about 15% of the HLC NF would be suitable for timber production. Alternative E has the most lands suitable for timber production (about 16% of the HLC NF). The lands suitable for timber production show relatively little variance because the primary factors that drive this determination do not vary by alternative, including vegetation types and land allocations such as designated wilderness and IRAs. PTSQ and the projected wood sale quantity (PWSQ) similar for alternatives A, B/C and D, and greater with alternative E. However, under alternative E the greatest volume would be produced and the fewest acres would be harvested because to maximize timber production, the types and locations of treatment would capitalize on stands with the highest volume available. In addition, because the RWAs identified in the other alternatives are almost exclusively in IRAs, they would not be considered for timber production in any alternative.

Forestwide comparison of alternatives by resource issue

Table 3 describes the range of alternatives with respect to the resource issues which did not drive alternatives. This table is arranged by resource area, with each alternative ranked from 1 to 5, with 1 being the greatest in magnitude or greatest relative contributions to desired conditions to 5 being the lowest contribution. More information about the indicators can be found in chapter 3. Not all of the resource indicators found in chapter 3 are included. In many cases the primary difference is between the no-action and action alternatives.

Table 3. Comparison of alternatives by resource issue - magnitude or relative contribution to desired condition

Resource Area	Indicator	1	2	3	4	5
Watersheds	Water Quality	BCD	E	A		
	Water Quantity	ABCDE				
	Overall movement toward desired conditions	BCD	E	A		
Riparian	Riparian Desired Condition	BCDE	A			
Fisheries and Aquatic Habitat	Aquatic Habitat (includes all above)	BCD	E	A		

Resource Area	Indicator	1	2	3	4	5
Soils	Riparian	BCDE	A			
	Uplands	D	BC	A	E	
Air Quality	Acres per decade of wildfire and prescribed fire	ABCDE				
Fire and Fuels Management	Flexibility for fire management	E	A	C	B	D
	Future vegetation treatments	ABCD	E			
	Future wildfires and fire regimes	ABCDE				
Terrestrial Vegetation	Composition, structure, pattern, snags, old growth, and downed woody debris (movement toward desired conditions)	BCDE	A			
Terrestrial Wildlife Diversity	Overall movement toward desired habitat conditions	BCDE	A			
Terrestrial Wildlife Species at risk	Grizzly bear and Canada lynx (contribution to recovery)	BCDE	A			
	Wolverine (contribution to long-term persistence in the plan area)	ABCDE				
	Species of conservation concern (movement toward desired habitat conditions)	BCDE	A			
Elk	General habitat desired conditions	ABCDE				
	Cover and/or habitat security	ABCDE				
Recreation Settings	Primitive and semi-primitive nonmotorized settings	D	C	B	AE	
	Semi-primitive motorized and roaded natural settings	AE	B	C	D	
Recreation Opportunities	Number and kind of developed recreation facilities and dispersed recreation sites	ABCDE				
Recreation Special Uses	Guidance for management of recreation special sues	BCDE	A			
Recreation Access	Miles of open road	ACE	B	D		
	Miles of motorized trails	ACE	B	D		
	Miles of nonmotorized trail, open for mechanical transport	AE	C	B	D	
	Miles of groomed trail	ABCE	D			
	Acres open to motorized over-snow use	AE	B	C	D	
	Aviation access (airstrips)	ABCDE				
Scenic Character	High and Very High SIOs	D	BE	C	A	
	Moderate, Low, and Very Low SIOs	A	C	BE	D	
Recommended Wilderness	Acres of recommended wilderness	D	BC	A	E	
	Wilderness characteristics	BD	AC	E		
Designated Wilderness	Wilderness characteristics	ABCDE				

Resource Area	Indicator	1	2	3	4	5
Wilderness Study Areas (WSAs)	Wilderness characteristics	D	B	C	AE	
IRAs	Roadless area characteristics	ABCDE				
Eligible WSRs	Free-flowing condition; outstanding & remarkable values	ABCDE				
Continental Divide National Scenic Trail	Visual quality and other desired conditions along the trail	BCDE	A			
Research Natural Areas (RNAs)	Acres established, proposed, candidate	D	ABCE			
Smith River Corridor	Natural and cultural values	BCDE	A			
Missouri River Corridor	Natural, cultural, and historic values	BCDE	A			
Cultural, Historic and Tribal Resources	Cultural and historical values	D	B	C	E	A
Livestock Grazing	Expected Rangeland Condition and trend	BCDE	A			
	Acres suitable rangeland	ABCDE				
	Number of permitted livestock head months	ABCDE				
Timber and other Forest Products	Timber production (volume)	E	ABCD			
	Acres treated with harvest and prescribed fire	ABCD	E			
	Other forest products (commercial opportunities)	E	A	BC	D	
Minerals	Lands open to mineral entry and access	E	A	C	B	D
Carbon	Carbon storage potential and guidance	BCDE	A			
Social and Economic	Direct income and jobs	E	A	BCD		
	Fish and wildlife (including non-use values)	D	BC	E	A	
	Grazing (including non-use values)	C	A	E	B	D
	Infrastructure	BCD	E	A		
	Other income and jobs	ABCDE				
	Public information, interpretation, and education	BCDE	A			
	Ecosystem integrity (including erosion control, flood protection, and non-use values)	BCD	E	A		
	Fire suppression (and mitigation)	BCD	E	A		

Geographic area comparison of alternatives

Tables 4-13 display a comparison of the range of alternatives for each GA, in terms of significant issues as well as other resource indicators that vary by alternative and/or are key to understanding the unique effects to the GA. Issues or indicators that are not applicable to a given GA are omitted from the table (for example, if no RWAs are identified under any alternative, those indicators are not listed for that GA).

Big Belts

Table 4. Comparison of alternatives for the Big Belts GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	0	2	2	3	0
2) Acres of RWAs	0	21,407	21,407	37,750	0
Motorized and mechanized means of transport in recommended wilderness					
1) Miles of trail no longer available to mechanized means of transport	0	18.9	0	34.9	0
2) Miles of road no longer open for access	0	0	0	0.3	0
Timber harvest					
1) Acres suitable for timber production	43,538	67,379	67,379	69,283	69,295
2) Acres where harvest may occur for other purposes, outside IRAs[1]	80,404	69,230	69,230	68,982	67,943

1. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Castles

Table 5. Comparison of alternatives for the Castles GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	0	0	0	1	0
2) Acres of RWAs	0	0	0	30,606	0
Motorized and mechanized means of transport in recommended wilderness					
1) Miles of trail no longer available to mechanized means of transport	0	0	0	9.5	0
2) Miles of road no longer open for access	0	0	0	6.1	0
3) Acres of motorized over-snow use no longer available	0	0	0	26,332	0
4) Miles of motorized trail no longer available	0	0	0	31.9	0

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Timber harvest					
1) Acres suitable for timber production	17,743	18,450	18,450	17,859	18,450
2) Acres where harvest may occur for other purposes, outside IRAs[1]	18,533	21,876	21,876	20,258	21,876

2. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Crazies

Table 6. Comparison of alternatives for the Crazies GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	0	0	0	1	0
2) Acres of RWAs	0	0	0	24,977	0
Motorized and mechanized means of transport in recommended wilderness					
1) Miles of trail no longer available to mechanized means of transport	0	0	0	23.5	0
2) Miles of road no longer open for access	0	0	0	0	0
3) Acres of motorized over-snow use no longer available	0	0	0	4,754	0
4) Miles of motorized trail no longer available	0	0	0	0	0
Timber harvest					
1) Acres suitable for timber production	12,826	7,089	7,089	6,509	7,517
2) Acres where harvest may occur for other purposes, outside IRAs[1]	4,650	13,005	13,005	10,831	12,576

3. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Divide

Table 7. Comparison of alternatives for the Divide GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	2	1	1	2	0
2) Acres of RWAs	16,657	18,296	18,296	41,089	0
Motorized and mechanized means of transport in recommended wilderness					

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
1) Miles of trail no longer available to mechanized means of transport	0	16.3	0	24.2	0
2) Miles of road no longer open for access	0	0	0	0	0
3) Acres of motorized over-snow use no longer available	0	11.1	0	6,348	0
4) Miles of motorized trail no longer available	0	0	0	2.4	0
Timber harvest					
1) Acres suitable for timber production	76,023	62,640	62,640	60,081	71,656
2) Acres where harvest may occur for other purposes, outside IRAs[1]	46,793	73,827	73,827	69,094	66,984
South Hills Special Recreation Area acres	0	50,180	50,180	50,180	0

4. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Elkhorns

Table 8. Comparison of alternatives for the Elkhorns GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
3) Acres of additional undeveloped areas[1]	0	0	0	49,229	0
Timber harvest					
2) Acres where harvest may occur for other purposes, outside IRAs[2]	83,026	86,482	86,482	84,376	86,482
Elkhorns Core Area acres (No Mechanized Use)	0	0	49,229	0	0

5. Additional undeveloped areas that vary by alternative are those designated as a primitive ROS.
6. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Highwoods

Table 9. Comparison of alternatives for the Highwoods GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
3) Acres of additional undeveloped areas[1]	0	0	0	8,598	0
Timber harvest					
1) Acres suitable for timber production	1,170	0	0	0	1,048

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
2) Acres where harvest may occur for other purposes, outside IRAs[2]	1,167	2,677	2,677	2,677	1,628

7. Additional undeveloped areas that vary by alternative are those designated as a primitive ROS.
8. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Little Belts

Table 10. Comparison of alternatives for the Little Belts GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	0	1	1	4	0
2) Acres of RWAs	0	14,490	14,490	169,920	0
Motorized and mechanized means of transport in recommended wilderness					
1) Miles of trail no longer available to mechanized means of transport	0	12.9	0	109.8	0
2) Miles of road no longer open for access	0	0	0	15.1	0
3) Acres of motorized over-snow use no longer available	0	0	0	26,320.9	0
4) Miles of motorized trail no longer available	0	0	0	21.7	0
Timber harvest					
1) Acres suitable for timber production	208,975	232,217	232,217	226,716	232,222
2) Acres where harvest may occur for other purposes, outside IRAs[1]	114,212	130,254	130,254	120,832	130,249

9. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Rocky Mountain Range

Table 11. Comparison of alternatives for the Rocky Mountain Range GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
3) Acres of additional undeveloped areas[1]	0	0	0	125,266	0
Timber harvest					
1) Acres suitable for timber production	1,683	0	0	1,458	0
2) Acres where harvest may occur for other purposes, outside IRAs[2]	28,307	32,281	32,281	7,730	32,281

10. Additional undeveloped areas that vary by alternative are those designated as a primitive ROS.

11. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Snowies

Table 12. Comparison of alternatives for the Snowies GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	0	1	1	1	0
2) Acres of RWAs	0	95,299	95,299	95,299	0
Motorized and mechanized means of transport in recommended wilderness					
1) Miles of trail no longer available to mechanized means of transport	0	98.3	0	98.3	0
2) Miles of road no longer open for access	0	11.8	0	11.8	0
3) Acres of motorized over-snow use no longer available	0	13,145	0	13,144	0
4) Miles of motorized trail no longer available	0	0.1	0	0.1	0
Timber harvest					
1) Acres suitable for timber production	16,030	0	0	0	17,377
2) Acres where harvest may occur for other purposes, outside IRAs[1]	2,755	19,770	19,770	19,770	2,869

12. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

Upper Blackfoot

Table 13. Comparison of alternatives for the Upper Blackfoot GA

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
Recommended wilderness and undeveloped areas					
1) Number of RWAs	0	4	4	4	0
2) Acres of RWAs	0	69,591	69,591	74,948	0
Motorized and mechanized means of transport in recommended wilderness					
1) Miles of trail no longer available to mechanized means of transport	0	59.3	0	60	0
2) Miles of road no longer open for access	0	0	0	1.3	0
3) Acres of motorized over-snow use no longer available	0	11,134.4	0	15,355.2	0
4) Miles of motorized trail no longer available	0	0	0	3.4	0
Timber harvest					

Issue	Alternative A	Alternative B	Alternative C	Alternative D	Alternative E
1) Acres suitable for timber production	52,502	54,825	54,825	54,825	56,618
2) Acres where harvest may occur for other purposes, outside IRAs[1]	38,286	40,292	40,292	40,292	40,527

13. Harvest may also occur in IRAs, but is constrained by the 2001 Roadless Area Conservation Rule. See the Timber section.

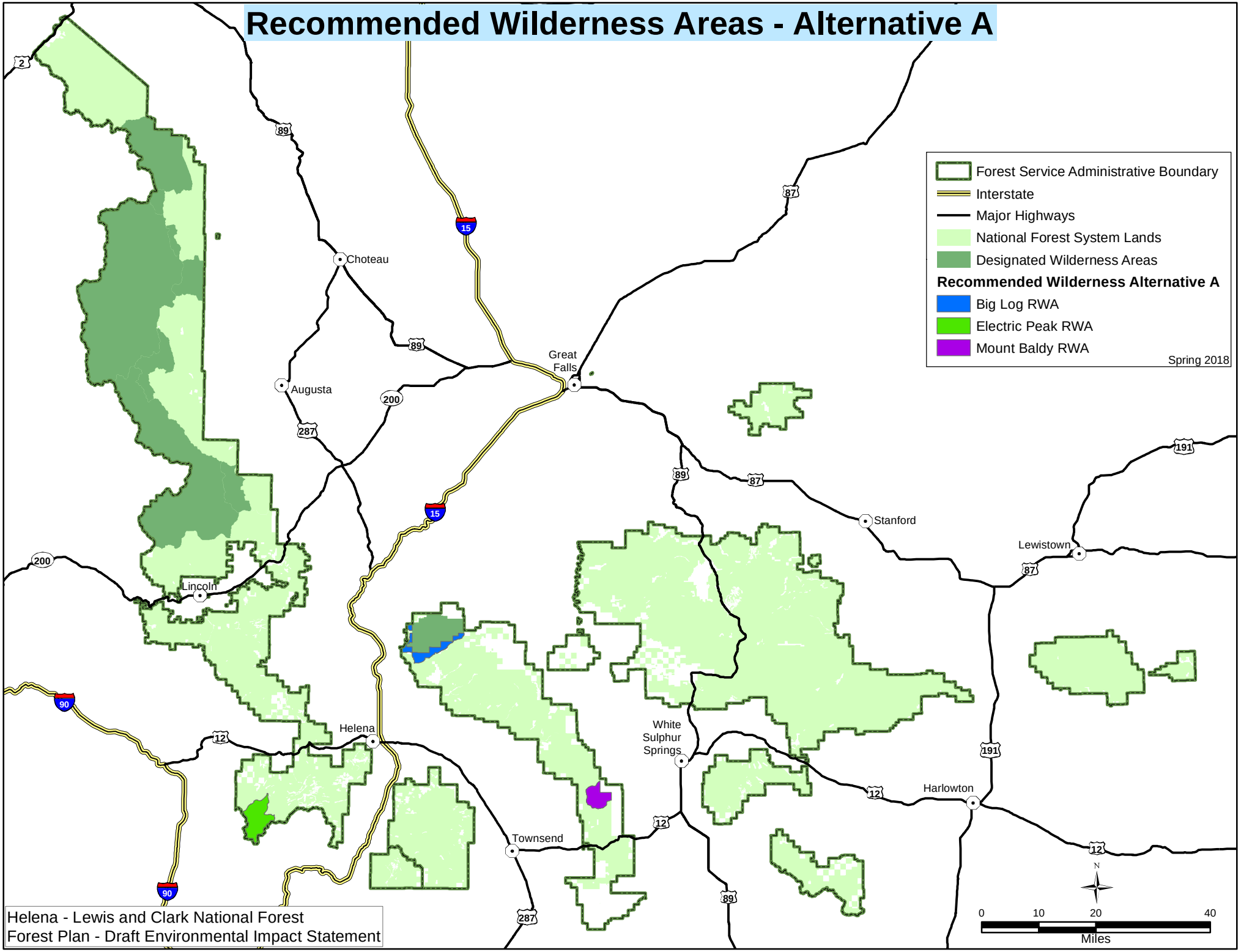
Monitoring plan

Under all action alternatives, monitoring would occur as listed in appendix A of the draft plan. The monitoring elements are designed to enable the Forest to determine if a change in plan components or other plan management guidance may be needed, forming a basis for continual improvement and adaptive management. The monitoring plan would have the effect of improving the HLC NF's ability to move toward the desired conditions for each resource area, by providing the information needed to assess change through time and support adaptive management actions.

Maps

Because of the high level of interest in wilderness, the recommended wilderness maps for the alternatives are attached. The remaining maps can be found in appendix A of the DEIS.

Recommended Wilderness Areas - Alternative A



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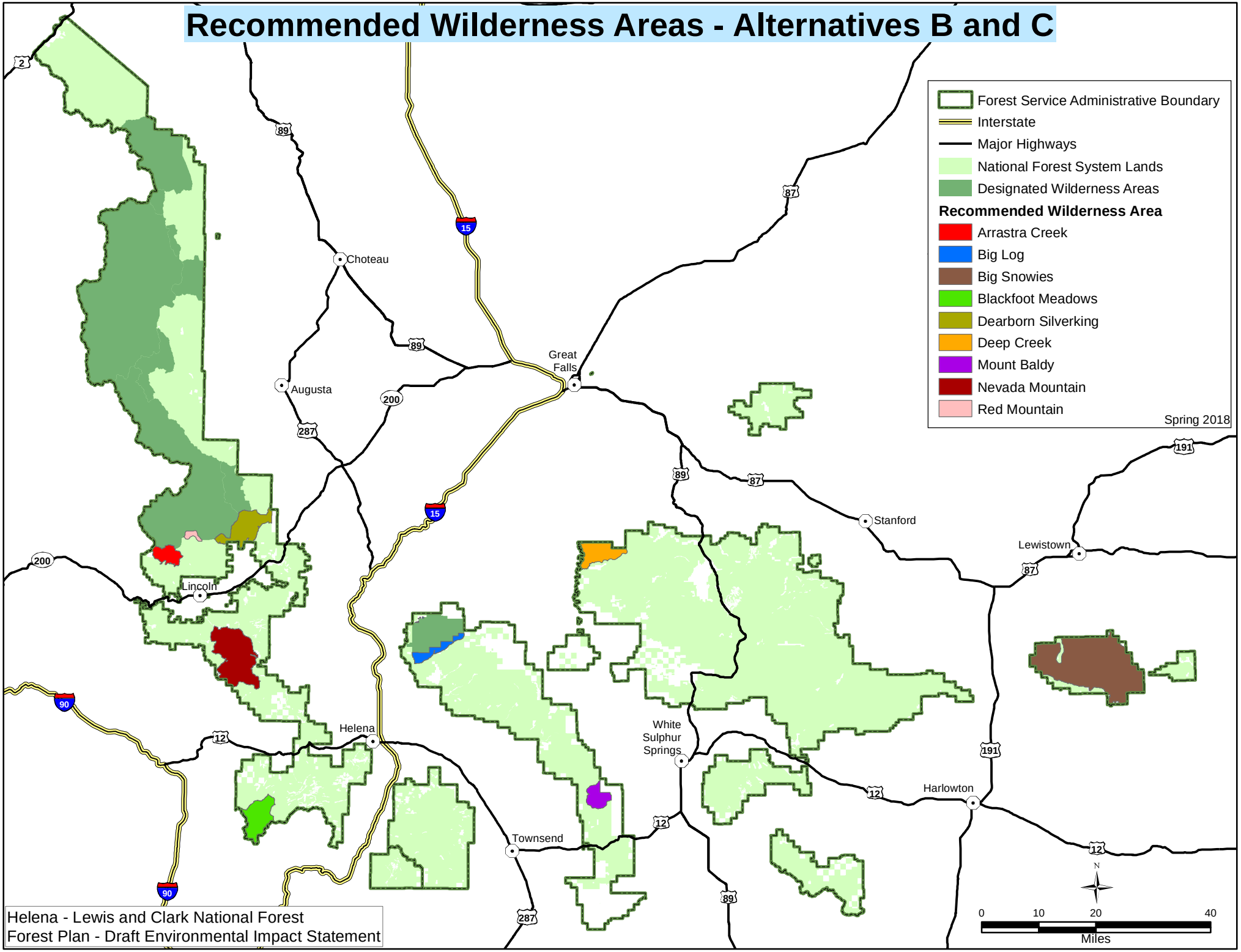
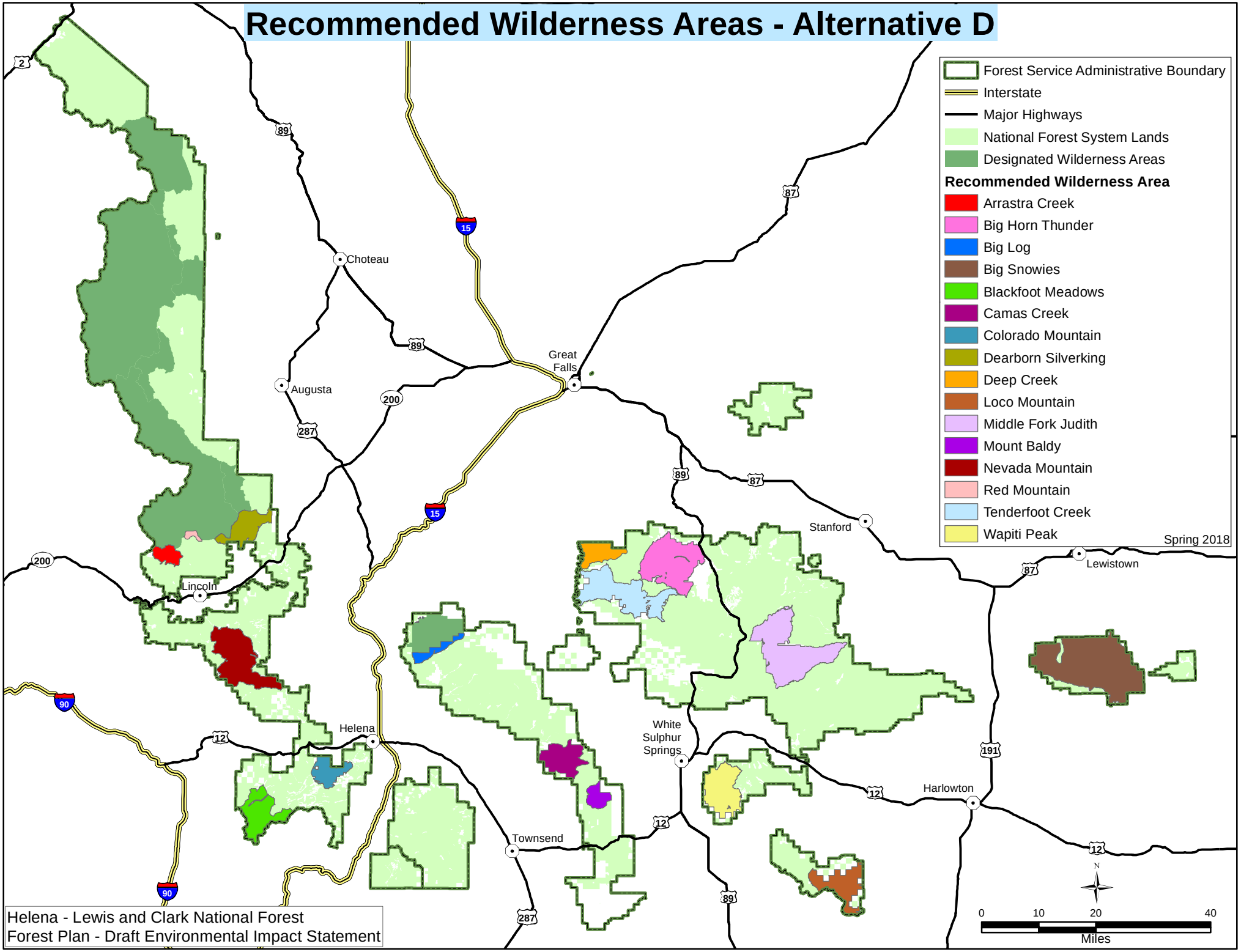
Recommended Wilderness Areas - Alternatives B and C



Recommended Wilderness Areas - Alternative D



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